Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of Petition of AT&T Communications of Virginia, Inc., Pursuant to Section 252(e)(5) of the Communications Act, for Preemption of the Jurisdiction of the Virginia State Cooperation Commission Regarding Interconnection Disputes with Verizon-Virginia, Inc.	CC Docket No. 00-251
In the Matter of Petition of WorldCom, Inc. Pursuant to Section 252(e)(5) of the Communications Act for Expedited Preemption of the Jurisdiction of the Virginia State Corporation Commission Regarding Interconnection Disputes with Verizon-Virginia, Inc., and for Expedited Arbitration	CC Docket No. 00-218

SURREBUTTAL TESTIMONY OF JOHN I. HIRSHLEIFER

ON BEHALF OF

AT&T AND WORLDCOM, INC.

September 21, 2001

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Q. PLEASE STATE YOUR FULL NAME AND OCCUPATION.

A. My name is John I. Hirshleifer and my business address is Charles River Associates, Inc., 10877 Wilshire Blvd., Los Angeles, California 90024. I am a Vice President at Charles River Associates, Inc. (CRA), an international financial and economic consulting firm.

Q. ARE YOU THE SAME JOHN HIRSHLEIFER WHO PREVIOUSLY SUBMITTED PREPARED DIRECT (7/31/01) AND REBUTTAL (8/17/01) TESTIMONIES ON BEHALF OF AT&T AND WORLDCOM IN THIS PROCEEDING?

A. Yes, I am.

Q. WHAT IS THE PURPOSE OF YOUR SURREBUTTAL TESTIMONY?

A. The purpose of my surrebuttal testimony is to respond to the prepared rebuttal testimony dated August 27, 2001 submitted in this proceeding by Dr. James H. Vander Weide ("Vander Weide Rebuttal") on behalf of Verizon Virginia ("VZ-VA") regarding the cost of capital.[1] In Sections I and II, I address Dr. Vander Weide's criticisms with respect to my cost of equity and capital structure estimates. In Section III, I refute Dr. Vander Weide's attempts to discard the cost of capital estimates used by investment banks and industry analysts. In Section IV, I rebut Dr. Vander Weide's "Tests of Reasonableness".

[1] I also respond to cost of capital issues discussed by Drs. Jerry A. Hausman and Howard Shelanski in their prepared rebuttal testimonies dated August 27, 2001.

I. DR. VANDER WEIDE'S ESTIMATE OF THE COST OF EQUITY IS SYSTEMATICALLY BIASED UPWARD.

A. Dr. Vander Weide's Assumption Of Perpetual Growth Guarantees An Excessive Rate Of Return.

Q. IN HIS REBUTTAL TESTIMONY DR. VANDER WEIDE ATTEMPTS TO BOLSTER HIS INCORRECT USE OF THE SINGLE STAGE DCF MODEL. (VANDER WEIDE REBUTTAL, PP. 43-46) IS HE ABLE TO CITE ANY LEADING AUTHORITY SUPPORTING THE USE OF THE SINGLE STAGE MODEL WHEN THE GROWTH RATE SIGNIFICANTLY EXCEEDS THE GROWTH RATE OF THE ECONOMY?

A. No. While I cite numerous leading scholars and practitioners in my direct testimony that clearly explain why the single-stage model is inappropriate for use in those circumstances, it is striking that he can cite nothing that rebuts these authorities. Obviously, these experts would not be advocating the superiority of multiple stage models if any of Dr. Vander Weide's arguments offered in regulatory proceedings regarding the single stage DCF model were true.

Q. DR. VANDER WEIDE'S ONE-STAGE DCF MODEL ASSUMES THAT ALL COMPANIES IN THE S&P INDUSTRIALS, INCLUDING ALL TELEPHONE HOLDING COMPANIES, WILL GROW FOREVER AT RATES HIGHER THAN THE GROWTH RATE OF THE ECONOMY. IN SUPPORT OF HIS MODEL DR. VANDER WEIDE ARGUES THAT "IT IS COMMON FOR COMPANIES TO GROW AT RATES SIGNIFICANTLY GREATER THAN THE RATE OF GROWTH IN GNP FOR LONG PERIODS OF TIME." (VANDER WEIDE

REBUTTAL, P. 44) IN PRIOR TESTIMONIES HE HAS CITED CERTAIN COMPANIES, SUCH AS WAL-MART, INTEL, MERCK AND CENTURYTEL, AS EXAMPLES THAT HAVE GROWN AT HIGH RATES FOR LONGER THAN FIVE YEARS.[2] IS HIS REASONING CORRECT?

A. No. No company, not even Wal-Mart, Intel, Merck and CenturyTel, will grow at those rates perpetually. Studious analysts would be hard-pressed to agree that these particular companies will all grow at high rates for the *next* 20 years, let alone forever. Intel, for example, has been the single most dominant microprocessor producer serving the microcomputer industry, which grew from a base of close to zero in the early 1980s, when microcomputers were unknown to consumers, to widespread use worldwide as of today. Obviously, the entire S&P Industrials does not enjoy the incredible position that Intel was in at the commencement of the 1980s.

Indeed, Intel's stock price dropped 70% from September 1, 2000 until September 19, 2001, and the company has reduced prices on its premier microchips.

It may be too early to know whether Intel's projected decline in earnings is a short-term blip or the harbinger of a longer-term slowdown in growth. One fact is clear, however: Intel is unlikely to continue growing indefinitely at the pace it set in recent years as its markets continue to saturate.

Q. IN SELECTING A FEW COMPANIES THAT HAVE HAD SEVERAL YEARS OF HIGH GROWTH, DID DR. VANDER WEIDE MENTION THE COMPANIES THAT HAD AVERAGE, OR POOR, OR NEGATIVE GROWTH?

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[2] *See e.g.*, Rebuttal Testimony of Dr. Vander Weide on behalf of Verizon-New England, Case DTE 01-20 (Part A), filed July 18, 2001, p. 56.

A. No. And Dr. Vander Weide is unable to tell us which companies of his S&P Industrial sample, or even of a sample of telephone companies, will grow at above-average rates, and which will have average or below-average rates of growth. Just in the last three years Laidlaw, Helmerich & Payne, Forster Wheeler, Fleetwood Enterprises, Pep Boys, Silicon Graphics, IKON Office Solutions, Milacron and several others were dropped from the S&P Industrial group. Laidlaw's earnings growth rate averaged *negative* 1% over a 10-year period; Pep Boys' *negative* 8.5% over the past 5 years; IKON's *negative* 7.0% over the past 10 years and *negative* 18.0% over the past 5 years.[3] Had these and other companies that were dropped from the S&P Industrials over the course of time in fact remained in the set, the expected growth rate for the aggregate sample would also likely be lower than the rate currently forecasted.

Q. IS THE S&P 500 GENERALLY DESIGNED TO BE AN INDEX OF LEADING COMPANIES?

A. Yes. The guiding principle for inclusion in the S&P 500 is that they are "leading companies in leading US industries."[4] In addition to rebutting Dr. Vander Weide's argument that all companies are expected to grow at high rates forever, this fact highlights a selection bias that further taints his choice of comparables. By using an index that is periodically repopulated by dropping selected poorly-performing companies and adding better-performing companies, Dr. Vander Weide is assuring himself that he

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[3] Value Line Investment Survey, Stock Profile Reports, May 18, 2001, and April 20, 2001.

[4] Standard & Poor's, General Criteria for S&P U.S. Index Membership, September 2000, p. 3.

will be using companies expected to have comparatively favorable growth expectations on the whole.

Q. DO OTHER SCHOLARS AND PRACTITIONERS AGREE THAT COMPANIES OFTEN FAIL TO SUSTAIN ABOVE-AVERAGE RATES OF EARNINGS GROWTH?

A. Yes. They are well aware of the fact that not all of the companies that have grown for many years at high growth rates will necessarily continue to exhibit such rapid growth.

Burton Malkiel, for example, has stated that,

> Corporations and industries have life cycles similar to most living things. There is, for corporations in particular, a high mortality rate at birth. *Survivors* can look forward to rapid growth, maturity, and then a period of stability. Later in the life cycle, companies eventually decline and either perish or undergo a substantial metamorphosis. Consider the leading corporations in the United States 100 years ago. *Such names as Eastern Buggy Whip Company, La Crosse and Minnesota Steam Packet Company, Lobdell Car Wheel Company, Savanna and St. Paul Steamship Line, and Hazard Power Company, the already mature enterprises of the time, would have ranked high in a "Fortune Top 500" list of that era. All are now deceased...*
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> *And even if the natural life cycle doesn't get a company, there's always the fact that it gets harder and harder to grow at the same percentage rate.* A company earning $1 million need increase its earnings by only $100,000 to achieve a 10 percent growth rate, whereas a company starting from a base of $10 million in earnings needs $1 million in additional earnings to produce the same record.
>
> *The nonsense of relying on very high long-term growth rates* is nicely illustrated by working with population projections for the United States. If the populations of the nation and of California continue to grow at their recent rates, 120 percent of the United States population will live in California by the year 2035! Using similar kinds of projections, it can be estimated that at the same time

> 240 percent of the people in the country with venereal disease will live in California. As one Californian put it on hearing these forecasts, 'Only the former projections make the latter one seem at all plausible.'[5]

Q. DR. VANDER WEIDE ARGUES THAT THE SINGLE-STAGE DCF MODEL IS VALID IF FIRMS CAN GROW AT A CONSTANT GROWTH RATE IN EXCESS OF GNP FOR 40 OR 50 YEARS. (VANDER WEIDE REBUTTAL, P. 45) IS THIS A HELPFUL DEFENSE OF THE SINGLE-STAGE MODEL?

A. No. It appears to be a very strong argument *against* using the single stage model. It is impossible to predict which, if any, companies could grow at rates above the economy's growth for that length of time. It does not appear that many would grow at high rates for that long. While some *small* companies with novel products can have many years of high percentage growth, most do not.[6] Sustained future periods of above-average growth are less likely for the average company in the S&P 500 list: a company must already have a relatively large capitalization to enter the list in the first place. And sustained future periods of above-average are even less likely for Verizon, the largest telephone holding company in the United States, and the other Bell holding companies. These are already enormous companies, and their growth rates are likely to slow further as the high-growth worldwide markets for wireless phones and data services saturate.

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[5] Burton G. Malkiel, *A Random Walk Down Wall Street,* 1999, pp. 97-99 (emphasis added).

[6] "While many investors recall the story stocks, such as Intel, Microsoft, and Wal-Mart, which have made investors rich, most forget about the many new firms that fail to fulfill their promise when they are issued. A study by Tim Loughran and Jay Ritter followed every operating company (almost 5,000) that went public between 1970 and 1990. Those who bought at the market price on the first day of trading and held the stock for five years, reaped an average annual return of only 5 percent." Jeremy J. Siegel, *Stocks for the Long Run* (1994), at p. 93 (citation omitted).

Investment bankers, for example, do not assume 40 to 50 years of high growth in their valuation analyses. All use growth rate projections that assume that growth tapers off over time in their DCF models. In valuing Sprint PCS, Morgan Stanley Dean Witter (Morgan Stanley) projected an initially high free cash flow growth rate which consistently declines every year: 76.9% (2003), 46.1% (2004), 25.3% (2005), 13.7% (2006), 8.7% (2007) and 4.2% (2008). After 2008, Morgan Stanley specifically stated that it assumed a 6.0% growth of free cash flow in perpetuity.[7]

Similarly, Morgan Stanley projected declining free cash flow growth rates for Alltel, one of the companies in my sample of comparables: 25.6% (2001), 18.4% (2002), 12.8% (2003), 8.9% (2004), 8.4% (2005), 6.0% (2006), 4.5% (2007) and 1.2% (2008) and assumed the perpetual growth after year 2008 to be 4%.[8]

If Morgan Stanley had assumed 40 years of growth for Alltel at the average growth rate over the first five years of 14.8%, or even at 8.4% as of year 5, it would have obtained a much higher valuation.

Q. IN PERFORMING DCF VALUATIONS, HAVE YOU EVER SEEN AN INVESTMENT BANK OR FINANCIAL ANALYST ASSUME THAT A COMPANY'S EARNINGS OR CASH FLOWS WILL GROW AT EITHER A HIGH RATE PERPETUALLY, OR FOR 40 OR 50 YEARS?

A. No. I have examined numerous DCF valuations over the years and all have used forecast methodologies similar to those used by investment banks as described in the prior

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[7] Morgan Stanley Dean Witter, "Sprint PCS Group," March 13, 2000, p. 6.

[8] Morgan Stanley Dean Witter, "Alltel Corporation," March 13, 2000, p. 3.

answer. This is because analysts are constrained by the reasonability of their valuation results. No one reasonably expects that companies that are growing quickly now will grow at high rates for long, long periods of time. If one were to make such assumptions, the resulting valuations would be stratospheric, and it would be clearly evident to the analyst that the assumptions made were simply wrong.

Q. IS IT REASONABLE TO ASSUME THAT THE ENTIRE S&P INDUSTRIALS WILL GROW AT RATES EXCEEDING THE GROWTH RATE OF THE ECONOMY FOR 40 OR 50 YEARS?

A. No. It is fairly easy to predict that the companies which currently comprise the S&P Industrials, used by Dr. Vander Weide as his comparable set, will *not* grow at rates significantly above the economy's growth rate for that length of time.

Q. IF DR. VANDER WEIDE SAYS THAT ONLY 40 TO 50 YEARS OF HIGH GROWTH ARE REQUIRED TO MAKE THE SINGLE-STAGE MODEL ACCEPTABLE, IS HE REALLY SAYING THAT HE SHOULD BE USING A TWO-STAGE MODEL WITH 40 YEARS OF SUPERNORMAL GROWTH AND THEREAFTER GROWTH AT THE ECONOMY'S RATE?

A. Of course. He is clearly validating the use of multiple stage models, although he unrealistically assumes that virtually all companies will grow at high rates for long periods of time.

Q. IF HE WERE TO USE A TWO-STAGE DCF MODEL THAT ASSUMED 40 YEARS OF SUPERNORMAL GROWTH, WOULD HE ARRIVE AT THE SAME COST OF EQUITY ESTIMATE THAT HE OBTAINS FROM A SINGLE STAGE DCF MODEL?

No. which entirely contradicts his assertion that 40 years of supernormal growth justifies the use of a single stage model. Even in comparison to a two-stage model with 40 years of supernormal growth, the one-stage model yields a significantly higher cost of equity.

To illustrate, I calculated the costs of equity of a hypothetical company using a one-stage DCF model and a 2-stage DCF model assuming that the high growth rate lasts 40 years. For this illustration I assumed that the company's IBES-equivalent growth rate equals the weighted average IBES growth rates of the telephone holding companies in my comparables sample (12.15%), and that the company pays a dividend yield of 2.53%, equal to the weighted average dividend yield of the sample. If it were assumed that 40 years of growth were correct, the cost of equity estimated using the one-stage DCF model overstates the cost of equity calculated using the 40-year two-stage DCF model by at least 150 basis points. (*See* Attachment JH-1.)

Moreover, the present value of the projected dividend stream in year 41 and beyond composes 41% of the total present value of the stock if the single-stage DCF model is used. The present value of just the portion of the dividend stream projected for year 100 and beyond accounts for 11% of the current stock value. Alternatively, using a modified 3-stage DCF model which assumes the first stage to last 20 years and convergence to the long-term growth rate of economy over the next 20 years, one arrives at a cost of equity estimate of 12.38%, 230 basis points lower than the single-stage DCF estimate.

Q. HAS DR. VANDER WEIDE ALWAYS ARGUED THAT AN ASSUMPTION OF 40 TO 50 YEARS OF SUPERNORMAL GROWTH IS ALL THAT IS REQUIRED TO USE THE SINGLE STAGE MODEL?

A. No. In his testimony in the 1997 Virginia UNE proceeding, his alternative, but similar, argument was that the impact on present value of dividend growth rate assumptions beyond *20 years* was de minimis due to the effect of discounting.[9] In fact, the present value of constantly-growing dividends beyond year 20 accounts for more than 60% of the company's stock value using my hypothetical company.

Q. WHAT COST OF CAPITAL WOULD RESULT IF A TWO-STAGE DCF MODEL WITH A FIRST STAGE OF 20 YEARS OF SUPERNORMAL GROWTH IS UTILIZED?

A. If I were to calculate a cost of equity assuming 20 years of supernormal growth as Dr. Vander Weide suggested, and then growth at the economy growth rate, the resulting cost of equity would equal 11.48%, 320 basis points less than the single-stage DCF estimate.

Q. HAS VERIZON ACKNOWLEDGED IN ANY OTHER CASE THAT THE CHOICE BETWEEN HIS ONE-STAGE DCF MODEL AND YOUR THREE-STAGE MODEL HAS A SIGNIFICANT EFFECT ON THE COST OF CAPITAL?

A. Yes. The cost of capital analysis submitted by Verizon's predecessor NYNEX in the 1996-97 UNE proceeding in Massachusetts illustrates this fact. Dr. Vander Weide was NYNEX's cost of capital witness in that case; and his methodology—including his one-stage DCF—was essentially identical to his methodology here.[10] In its initial decision, the Massachusetts commission adopted Dr. Vander Weide's methodology in its entirety,

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9 Direct Examination of Dr. James H. Vander Weide, Before the State Corporation Commission of Virginia, On Behalf of Bell-Atlantic-Virginia, Inc., Case No. PUC970005, pp. 204-5.

10 In the Matter of the Review of Unbundled Network Elements Rates, Terms and Conditions of BA-NJ, NJ BPU Docket No. TO00060356, 1 Tr. (Nov. 28, 2000), pp. 41-45 (Vander Weide).

with one exception: the commission directed NYNEX to file an alternative cost of capital calculation that substituted AT&T witness Dr. R. Glenn Hubbard's[11] three-stage DCF model for Dr. Vander Weide's one-stage model.[12] In response, NYNEX submitted a calculation showing that this one change would materially reduce the weighted average cost of capital.[13] When shown this document during cross-examination in the New Jersey UNE cost proceeding, Dr. Vander Weide acknowledged that the choice between his one-stage DCF and my three-stage DCF accounted for approximately 200 basis points of the difference between our cost of capital estimates.[14]

Q. DR. VANDER WEIDE CLAIMS THAT VALUE LINE FORECAST DATA CAN BE USED TO SUPPORT HIS ASSUMPTION THAT THE 5-YEAR I/B/E/S GROWTH RATES FOR HIS GROUP OF "COMPARABLE" COMPANIES WILL PERSIST INDEFINITELY IN THE FUTURE (VANDER WEIDE REBUTTAL P. 46). HOW DO YOU RESPOND TO THIS ASSERTION?

A. I first note that in prior rebuttal testimonies, Dr. Vander Weide has claimed that Value Line itself "publishes an estimate of each company's long-run growth from internal sources beyond the period beginning in 2003-2005"[15] which according to him confirmed

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[11] Dr. Hubbard is currently Chairman of the President's Council of Economic Advisors.

[12] *Id.*, pp. 47-50 (Vander Weide); D.P.U. 96-73/74, 96-75, 96-80/81, 96-83, 96-94 – Phase 4, *Consolidated Petitions of New England Telephone and Telegraph Company d/b/a NYNEX, Teleport Communications Group, Inc., Brooks Fiber Communications, AT&T Communications of New England, Inc., MCI Communications Company, and Sprint Communications Company, L.P., pursuant to Section 252(b) of the Telecommunications Act of 1996, for arbitration of interconnection agreements between NYNEX and the aforementioned companies* (released Dec. 4, 1996) ("Phase 4 Decision")

[13] Letter dated December 18, 1996 from Bruce Beausejour, NYNEX counsel, to Mary L. Cottrell, Secretary to MDTE.

[14] NJ BPU Docket No. *No.* TO00060356, *supra*, 1 Tr. (Nov. 28, 2000), pp. 50-51 (Vander Weide).

[15] *See e.g.*, Responsive Testimony of Dr. Vander Weide on behalf of Bell Atlantic-New York, Case 98-C-1357, filed June 26, 2000, p. 41.

that relatively high growth rates could be sustained for indefinitely long periods. This assertion foundered because it was clear to any reader of the Value Line reports that forecasts are provided for up to 5 years only. In fact, the Value Line reports cited by Dr. Vander Weide provided no forecast beyond the year 2005. My staff additionally confirmed directly with Value Line that it does not make such long-term forecasts asserted then by Dr. Vander Weide.

Q. IF VALUE LINE DOES NOT MAKE FORECASTS BEYOND A FIVE-YEAR HORIZON, HOW IS DR. VANDER WEIDE UTILIZING DATA OBTAINED FROM VALUE LINE?

Dr. Vander Weide is saying that, by using the traditional book "b X r" method (where "b" represents book earnings that are retained by the company, and "r" represents the book return on *book* equity), he, not Value Line, is inferring a long-run growth rate by looking at *book* retained earnings growth and *assuming* it will persist indefinitely into the future.

Dr. Vander Weide is simply taking data from Value Line reports and using a method sometimes used in past traditional regulatory hearings for stable, regulated industries which are not expected to experience significant variance from their historical growth rates, and whose book value equities are approximately equal to the market value of their equities. Similar to his assertions that 5-year analyst forecast growth rates are expected by investors to persist forever, Dr. Vander Weide has not provided any evidence that investors believe that supernormal growth rates obtained using this alternative method will persist forever.

Q. IS THE USE OF A METHOD WHICH IS BASED ON THE RETURN ON BOOK EQUITY CONSISTENT WITH DR. VANDER WEIDE'S TESTIMONY

REGARDING THE APPROPRIATE CAPITAL STRUCTURE TO BE USED IN ESTIMATING THE COST OF CAPITAL?

A. No. Dr. Vander Weide has vociferously argued that a market-value capital structure is the only one that can be used because a book capital structure is based on embedded costs and is backward looking. Consequently, his argument that a book value method is appropriate for estimating growth, a critical input in estimating the forward-looking cost of equity using the DCF method, is fatally discrepant.

Q. DR. VANDER WEIDE CLAIMS THAT YOUR THREE-STAGE ASSUMPTIONS ARE UNUSUAL AND ARBITRARY. (VANDER WEIDE REBUTTAL, P. 45). WHAT ARE YOUR COMMENTS?

A. This hardly constitutes a defense of the perpetual growth assumption for companies currently experiencing high growth– an assumption that is not only arbitrary but unequivocally incorrect. As cited in my direct testimony, for example, Professor William Sharpe of Stanford and his co-authors indicated that sophisticated institutional investors found the assumptions of single-stage and two-stage models overly simplistic, and that they preferred three-stage models for providing the best combination of realism and ease of use.[16]

Professor Aswath Damodoran of New York University illustrates many analytical approaches for discounted cash flow modeling. Dr. Damodaran describes numerous multiple-stage DCF models with varying formulations and characteristics. Dr. Damodaran states that it is unrealistic to assume that a company with a high growth rate

[16] Sharpe, William F., Gordon J. Alexander and Jeffrey V. Bailey, *Investments*, Fifth Edition, Prentice Hall, Englewood Cliffs, New Jersey, 1995, pp. 590-591.

would grow at this rate in perpetuity. Depending on how high the company's current growth rate is, Dr. Damodaran suggests different patterns and different lengths of time for the high-growth period. After the period of high growth, Dr. Damodaran assumes that the company will continue to grow at the stable growth rate of economy. He suggests the following guidelines for defining the length of this first stage:[17]

If the Current Growth Rate Is:	*Length of High Growth Period:*
≤ 1 % higher than stable growth rate	No high growth
1-10 % higher than stable growth rate	5 years
> 10 % higher than stable growth rate	10 years

Notably, Dr. Damodaran *never* suggests that the single-stage DCF model should be used for companies with growth rates significantly above the growth rate of the economy.

Dr. Damodaran indicates that for companies that have super normal growth rates that are not particularly high, a two-stage or H Model could be used. Had I utilized either Dr. Damodaran's two-stage or H model with a 5-year initial stage as suggested for all of the individual telephone holding companies, the cost of equity estimates would have been lower than what I actually calculated.[18] Consequently, my DCF model results are conservatively high in comparison to the results of these models.

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[17] Damodaran, Aswath, *Applied Corporate Finance: A User's Manual*, John Wiley & Sons, 1999, p. 447.

[18] In Dr. Damodaran's two-stage model, the growth rate between years 5 and 20 equals the long-term growth rate. In my model, however, the growth rates are higher than the long-term rate until year 20. Consequently, the cost of equity resulting from my model will necessarily be higher than an estimate derived from Dr. Damodaran's 2-stage model.

Q. UNDER WHAT CIRCUMSTANCES DOES DR. DAMODARAN SUGGEST THAT THE "H MODEL" SHOULD BE USED?

A. Dr. Damodaran states that:

> The H model is a two-stage model for growth, but unlike the classical two-stage model, the growth rate in the initial growth phase is not constant but declines linearly over time to reach the stable-growth rate in steady stage.[19]

Dr. Damodaran indicates that the best use for this model is for firms that are growing rapidly at the present, but for which the growth is expected to decline gradually over time as their differential advantage over their competitors declines. Therefore, this model appears suitable for use with telephone holding companies.

As shown in Attachment JH-4 of my direct testimony, the telephone holding companies in the sample have five-year earnings growth rates between 11% and 14.8% (4.7% and 8.5% above the stable growth rate of 6.29%). Had I applied Dr. Damodaran's H model to the set of comparables, the resulting costs of equity would have been *lower* than those that I calculated. This is because in the H model the high initial growth rates begin to decline immediately, while my DCF model assumes that the IBES five-year growth rates do not decline over the first 5 years. After the initial growth phase, the growth rate declines linearly to the long-term rate until year 20. Therefore, in every year after the first my model utilizes higher growth rates than would be used in the H model.

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[19] Damodaran, Aswath, *Damodaran on Valuation: Security Analysis for Investment and Corporate Finance*, John Wiley & Sons, New York, 1994, p. 115.

Q. WHAT DOES DR. DAMODARAN SAY ABOUT COMPANIES WHICH MIGHT BE APPROPRIATE FOR THE CLASSICAL TWO-STAGE DCF MODEL?

A. Damodaran suggests that one type of company for which this would be a suitable model is a company:

> ...in an industry that is enjoying supernormal growth because significant barriers to entry (either legal or as a consequence of infrastructure requirements) can be expected to keep out new entrants for several years.
>
> The assumption that the growth rate drops precipitously from its level in the initial phase to a stable rate also implies that *this model is more appropriate for firms with modest growth rates in the initial phase*. It is more reasonable, for instance, to assume that a firm growing at 12% in the high-growth period will see its growth rate drop to 6% after that than it is for a firm growing at 40% in the high-growth period.[20] [*emphasis added*]

Q. IF YOU ASSUMED THAT THIS WAS THE MOST APPROPRIATE MODEL TO USE, WHAT IMPACT WOULD IT HAVE HAD ON YOUR DCF COST OF EQUITY ESTIMATE?

A. As I stated above, if I had instead used this model—which certainly appears applicable in this case based on Dr. Damodaran's analysis—it would have resulted in a *lower* cost of equity than what I actually calculated.

Q. DOES DR. DAMODARAN HIMSELF DESCRIBE A 3-STAGE DCF MODEL?

A. Yes, although his 3-stage model is more complex model and differs in many ways from the model I employ. Dr. Damodaran's three-stage model allows for an initial period of

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[20] *Id.*, pp. 108-109.

high growth, a transitional period in which growth declines, and a final stable-growth phase; however, Dr. Damodaran states that his three-stage dividend discount model requires year-specific payout ratios, growth rates and betas. The purpose for year-specific betas is to compute distinct costs of equity for each phase of the model. This feature allows an analyst to refine his valuation estimate by changing the expected cost of equity in line with the analyst's estimate of the changing risk characteristics of the firm being valued. My model does not assume changing payout ratios nor does it utilize betas. Because it assumes that the cost of equity changes in each phase, Dr. Damodaran's 3-stage model cannot be used to solve for a cost of equity.

B. The Risks Of Supplying Unbundled Network Elements In Virginia Do Not Justify The Use Of DCF Comparison Groups That Include Non-Telephone Companies.

1. TELRIC cost principles do not require the Commission to assume that Verizon Virginia faces intense competition regardless of the facts.

Q. DR. VANDER WEIDE CLAIMS THAT YOUR COST OF CAPITAL ESTIMATE IS INCONSISTENT WITH THE FORWARD-LOOKING ECONOMIC COST PRINCIPLES ESTABLISHED BY THE FCC (VANDER WEIDE REBUTTAL, P. 2). IS THIS CORRECT?

A. No. Dr. Vander Weide overlooks numerous key provisions of the FCC August 8, 1996 Order which provide guidance for the determination of costs of capital associated with UNEs.

Dr. Vander Weide states that:

> [T]he forward-looking economic cost principle is economically relevant only in a competitive market for telecommunications services. Thus, the forward-looking economic cost principle, at its heart, is based on the assumption that the market for local exchange services is fully competitive. [Vander Weide direct testimony p. 36]
>
> A proper definition of the cost of capital for use in Verizon MA's forward-looking cost studies is based on the assumption that the market for local exchange services is competitive. [Vander Weide direct testimony p. 46]
>
> [T]his commission's cost study principles require that cost studies "replicate...the conditions of a competitive market" for unbundled network elements. [Vander Weide direct testimony p. 42]
>
> Mr. Hirshleifer's cost of capital estimate is intended to be used as an input to AT&T/WorldCom's forward-looking economic cost studies, which, according to the Commission, should produce rates that replicate the results of a competitive telecommunications market. [Vander Weide rebuttal testimony p. 6]

Dr. Vander Weide also argues in this testimony (Vander Weide rebuttal p. 6) that the FCC required the assumption of a competitive telecommunications market. This assumption is contrary to the purpose of the 1996 Act and ¶¶ 688 and 702 of the FCC August 8, 1996 Order. In particular, paragraph 702 of the FCC's *Local Competition Order* of August 8, 1996 makes explicit statements that entirely disprove Dr. Vander Weide's interpretation. I highlighted those statements at page 4 of my rebuttal testimony. In contrast, the cost of capital that I have recommended is a risk-adjusted cost of capital referenced in ¶ 702, and takes into account all relevant risks.

The FCC August 8, 1996 Order is replete with statements in other sections that further contradict Dr. Vander Weide's erroneous assumptions.

For example,

> The 1996 Act *encourages* competition by removing barriers to entry and providing an opportunity for potential new entrants to purchase unbundled incumbent LEC network elements to compete efficiently to provide local exchange services. [¶ 672] [*emphasis added*]
>
> *The incumbent LEC offerings to be priced using this methodology generally will be "network elements," rather than "telecommunications services,"* as defined by the 1996 Act. More fundamentally, we believe that *TELRIC-based pricing of discrete network elements or facilities*, such as local loops and switching, is likely to be *much more economically rational than TSLRIC-based pricing of conventional services, such as interstate access service and local residential or business exchange service.* [¶ 678] [*emphasis added*]
>
> Congress recognized in the 1996 Act that *access to the incumbent LEC's bottleneck facilities is critical to making meaningful competition possible. As a result of the availability to competitors of the incumbent LEC's unbundled elements at their economic cost, consumers will be able to reap the benefits of the incumbent LEC's economies of scale and scope, as well as the benefits of competition.* Because a pricing methodology based on forward-looking costs simulates the conditions in a competitive marketplace, *it allows the requesting carrier to produce efficiently and to compete effectively, which should drive retail prices to their competitive levels.* We believe that our adoption of *a forward-looking cost-based pricing methodology should facilitate competition on a reasonable and efficient basis by all firms in the industry* ***by establishing prices for interconnection and unbundled elements based on costs similar to those incurred by the incumbents***, ...[¶ 679] [*emphasis added*]
>
> ...we find that *incumbent LECs must prove* to the state commission the nature and magnitude of any forward-looking cost that it seeks to recover in the prices of interconnection and unbundled network elements. [¶ 680]

It is evident from a reading of the FCC August 8, 1996 Order that the FCC does not accept Dr. Vander Weide's argument that cost should be based on telecommunications services, nor that there should be a hypothetical assumption that the

risks of a fully competitive market exist for UNEs when in fact they do not. While Dr. Vander Weide asserts in this proceeding that actual UNE competition justifies an assumption of a fully competitive market, he has not met his burden of proof in this regard. Dr. Vander Weide's failure to provide convincing evidence means that his already-questionable selection of the S&P Industrials as the basis for his cost of capital calculation is not supportable.

Q. HAS ANY COURT AGREED WITH YOU ABOUT THE RISK ASSUMPTIONS IMPLIED BY THE TELRIC STANDARD?

A. Yes. In the 1997 UNE proceeding before the Delaware PSC, Dr. Vander Weide argued for Bell Atlantic, as he now does in the FCC Virginia proceeding, that the TELRIC standard requires state commissions to assume that the supplier of unbundled network elements faces intense competition. The Delaware Public Service Commission rejected this argument for the same reasons I offer here. Bell Atlantic appealed to the United States District Court in Delaware. The court upheld the Delaware Commission on this point, again for the same reasons I have offered here:

> Bell points to an apparent contradiction in assuming instantly competitive prices for network elements (even though no such competition now exists) but, in the context of determining cost of capital, assuming little competition and, consequently, low costs of capital. ... The Telecommunications Act attempts to recreate the prices that a hypothetical efficient company would charge for its network elements and services in a competitive market. Indulging in this fiction, however, does not change the fact that ILECs like Bell do not face the same competitive risks as firms operating in a competitive market. Indeed, ILECs have had no competition for decades, and they will face little competition in the market for network elements in the near future. *See August 8, 1996 Order* ¶ 702, at 353. Therefore, in introducing competition in the local

telephone market, it makes perfect sense to recreate competitive prices while acknowledging that the current lack of competition warrants reduced costs of capital.[21]

Q. HAS ANY OTHER ECONOMIC CONSULTANT TO VERIZON AGREED WITH THE U.S. DISTRICT COURT ON THIS POINT?

A. Yes. National Economic Research Associates ("NERA") is a consultant to Verizon. Dr. William Taylor, Verizon's economic witness in multiple TELRIC proceedings, is a senior vice president with NERA. In the UNE cost proceeding before the New York Public Service Commission last year, an excerpt of a report authored by NERA was entered as evidence. That excerpt states in part:

> In terms of the more general concept of incremental costs, TELRIC maintains the following specific assumptions.
>
> First, the business decision being modeled is that of a hypothetical local exchange carrier that offers unbundled elements to retail providers (possibly itself) at undifferentiated prices. Hence the increments in question are the total volume for the elements demanded by the retail providers.
>
> Second, the time horizon over which the ILEC offers the wholesale elements is assumed to be the longest of the long-run. *Implicit in this definition are the assumptions that (1) the ILEC will effectively be a monopolist in the provision of network elements for the indefinite future* and (2) competitors will need to obtain such elements to compete over this time frame.[22] [footnotes omitted; *emphasis added*]

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[21] *Bell Atlantic-Delaware, Inc. v. McMahon*, 80 F.Supp.2d 218 (D. Del. 2000) at 240 n. 19.

[22] Excerpt from "An Economic Evaluation of Network Cost Models", NERA, August 7, 2000, Exhibit 408, State of New York Public Service Commission, *Proceeding on Motion of the Commission to Examine New York Telephone Company's Rates for Unbundled Network Elements*, Case 98-C-1357.

Dr. Taylor has himself acknowledged the distinction between attempting to replicate the *costs* of a firm in a competitive market, and arbitrarily assuming that an incumbent monopoly carrier faces the *risks* of a firm in a competitive market. Testifying in the UNE proceeding in Virginia in 1997, Dr. Taylor agreed that it was not unheard of for regulators to set prices in noncompetitive markets that replicate the prices that would result from a competitive market.[23] Moreover, he conceded that it was possible for a regulatory standard which sets rates at competitive levels to coexist with an environment in which the regulated firm faces less competitive risks than a competitive firm would face.[24]

Q. BOTH DR. VANDER WEIDE AND DR. SHELANSKI CITE A FOOTNOTE TO THE FCC'S BRIEF TO THE SUPREME COURT WHICH STATES THAT "AN APPROPRIATE COST OF CAPITAL DETERMINATION TAKES INTO ACCOUNT NOT ONLY EXISTING COMPETITIVE RISKS...BUT ALSO RISKS ASSOCIATED WITH THE REGULATORY REGIME TO WHICH A FIRM IS SUBJECT." (VANDER WEIDE REBUTTAL, P. 19; SHELANSKI REBUTTAL, P. 10) IS THIS STATEMENT SUPPORTIVE OF YOUR APPROACH, OR OF DR. VANDER WEIDE'S?

A. It is helpful to mine. The quoted language makes clear that the cost of capital used in determining UNE prices must take account of the particular competitive risks, existing

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[23] *Ex Parte to Determine Prices Bell Atlantic—Virginia, Inc. Is Authorized to Charge Competing Local Exchange Carriers in Accordance with the Telecommunications Act of 1996 and Applicable State Law*, Virginia State Corporation Commission, Case No. PUC970005, Tr. at 580 (statement of William E. Taylor).

[24] *Id.* at 581 (emphasis added).

and anticipated by the market, entailed in supplying UNEs, as well as regulatory risks anticipated by the market. By necessary implication, the analyst may not simply assume, without analysis, that the relevant risks are those of a vigorously competitive market. My cost of capital analysis considers both the competitive and regulatory risks that would face a wholesale supplier of UNEs in Virginia. Dr. Shelanski's statement that "the modified Synthesis Model contains no provision for such risk" [Shelanski Rebuttal, p. 10] is therefore incorrect. In contrast, Dr. Vander Weide's use of an incorrect comparison group based on S&P Industrial companies considers neither set of risks.

Q. IS DR. VANDER WEIDE'S POSITION REGARDING AN ASSUMPTION OF COMPETITIVE RISKS CONSISTENT WITH VERIZON'S OWN POSITION?

A. No. In its brief to the Supreme Court supporting its opposition to the use of TELRIC, Verizon stated that:

> ...TELRIC similarly presumes that carriers in its fictional world of constant network replacement would nonetheless continue to have the same cost of capital established for incumbents in the stable, low-risk monopoly system of the past...
>
> The FCC's order, moreover, requires the States to start with the existing rate of return, and places the burden on incumbents to demonstrate with specificity that the business risks—defined exclusively in terms of facilities-based entry by competitors—justify any change in the rate of return.[25]

Verizon cites ¶¶ 687, 688 and 702 of the FCC's August 8, 1996 Order in support of these statements.

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[25] *Brief for Petitioners*, On Writ of Certiorari to the United States Court of Appeals for the Eighth Circuit, In the Supreme Court of the United States, October Term, 2000, No. 00-511.

2. Dr. Vander Weide exaggerates the competitive risk of VZ-VA's local telephone service generally and fails to distinguish between the competitive risks of providing UNEs at wholesale and providing local telephone services at retail.

Q. HAS ANY COURT NOTED DR. VANDER WEIDE'S FAILURE TO DISTINGUISH BETWEEN THE COMPETITIVE RISKS OF PROVIDING UNES AT WHOLESALE AND PROVIDING LOCAL TELEPHONE SERVICES AT RETAIL?

A. Yes. In *Bell Atlantic-Delaware, Inc. v. McMahon*, 80 F.Supp.2d 218, 240 (D.Del. 2000), the court stated as follows (emphasis in original):

> In assessing Bell's case for an elevated cost of equity, the Hearing Examiners criticized the testimony of Bell's expert, Dr. James Vander Weide. The Examiners noted that Vander Weide based his cost of equity on the risk associated with Bell's retail business instead of on the future demand for Bell's network elements that it will sell at *wholesale*. AT&T's expert, Bradford Cornell, also criticized Vander Weide's analysis as "ignor[ing] the critical fact that the business at hand in this proceeding is *not* local retail phone service that already exists, but rather the new business of leasing of network elements at *wholesale* for use in providing competitive phone services to an existing *retail* market." [citation omitted] The distinction between wholesale and retail is crucial.
>
> Retail competition is competition for the end user of telephone service. That sort of competition is not at issue when determining the risks associated with leasing unbundled network elements (e.g., loops and switches) at wholesale. The risks associated with leasing "bottleneck" network elements at wholesale is less than that associated with competition for retail service. *See August 8, 1996 Order* ¶ 702, at 353 (noting that network elements "generally are bottleneck, monopoly services that do not now face significant competition"). This is so because Bell often is the only provider of these network elements, and it is to Bell that new entrants must come to lease or purchase loops, switches, or other network elements. Thus, even if retail competition intensifies, Bell's prominence as a wholesale provider of network elements will remain largely unaffected—at least until new entrants build their own networks.

> [footnote omitted] Accordingly, the Hearing Examiners correctly rejected Vander Weide's testimony as impermissibly attributing the risks of retail competition to the competition in the sale of unbundled network elements. *See August 8, 1996 Order* ¶ 691, at 348 (explaining that, "[o]nly those costs that are incurred in the provision of network elements in the long run shall be directly attributable to those elements").

Q. IN HIS REBUTTAL TESTIMONY DR. VANDER WEIDE HAS ARGUED THAT "SIGNIFICANT FACILITIES-BASED COMPETITION ALREADY EXISTS FOR LOCAL EXCHANGE SERVICES IN VIRGINIA, AND INVESTORS EXPECT FUTURE COMPETITION TO INCREASE RAPIDLY." (VANDER WEIDE REBUTTAL, P. 21) WHAT IS YOUR RESPONSE TO THIS ARGUMENT?

A. I have reviewed the evidence that Dr. Vander Weide suggests for competition in Virginia. In general, his examples do not clearly distinguish between facilities offered by network competitors, and end users which are retail customers of competitors but ultimately use VZ-VA's network elements. He thus ignores the crucial distinction recognized by the U.S. District Court in Delaware. As stated by ABN Amro in its January 20, 2000 report covering Bell Atlantic, for example, 1.1 million access lines that Bell Atlantic supposedly lost to competition as of the close of the third quarter of 1999 are *were in fact being supplied by Bell Atlantic on a wholesale basis.*[26] In its August 2000 announcement of quarterly results, Verizon stated that its "wholesale business provid[es] nearly 2.9 million switched access lines and 541,000 unbundled loops."[27] To the extent that competitors are using Verizon's network elements, Bell Atlantic retains those facilities revenues and has

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[26] ABN Amro also added that "[o]ffsetting these setbacks, Bell Atlantic added nearly 6 million lines from year-end 1995 through the third quarter of 1999, a 3.2% CAGR." (p. 24) [emphasis added]

[27] Verizon Press Release, "Verizon Communications Announces Second Quarter Results," August 8, 2000.

lost nothing on the UNE level, which is the sole subject of this proceeding.[28] Without evidence that the network facilities business, as opposed to the local exchange or telecommunications businesses, has become dramatically competitive, Verizon has failed to satisfy at least one element of its burden of proof required by paragraphs 680 and 702 of the FCC August 8, 1996 Order.

Q. DR. VANDER WEIDE ARGUES THAT THE MINIMAL CLEC PENETRATION NOTED IN DIRECT TESTIMONY OF MR. WEST PORTENDS GREAT UNE COMPETITION IN THE FUTURE. (VANDER WEIDE REBUTTAL, P. 22) HOW DO YOU RESPOND TO THIS ARGUMENT?

A. Dr. Vander Weide's predictions about future competitive developments are empty speculation; they ignore the high barriers to entry that appear likely to remain in the foreseeable future. The recent bankruptcies of one-time potential competitors such as Northpoint, Rhythms and Covad merely underscore the fanciful nature of Dr. Vander Weide's projections of competition.

Even on the level of retail local exchange, Verizon is experiencing a decline in competitive entry:

> Verizon is seeing a significant slowdown in the sequential growth in its reported wholesale lines as CLECs are hit by the drop off in funding. In Q2 00 533,000 wholesale lines were added, in Q3 00 364,000 lines were added, in Q4 00 335,000 lines were added, and in Q1 01 only 84,000 wholesale lines were added. If this trend continues, we could see far less share loss to competitors that we currently have factored in to our projections. With most CLECs in

[28] In its May 15, 2000 "Telecom -Wireline" report Morgan Stanley Dean Witter highlighted that in the first quarter of 2000 it "saw some renewed strength in local and access revenues. Sales of value added services and strong wholesale business more than offset local competition."

> dire financial straits right now, any upside on the competitive front could be a powerful offset to any potential lingering economic weakness.[29]

Q. IS IT NOT POSSIBLE THAT FACILITIES-BASED COMPETITION, WHETHER EXISTING TODAY OR EMERGING IN THE DISTANT FUTURE, WOULD DEPRIVE VZ-VA OF REVENUES IN THE BUSINESS OF LEASING UNBUNDLED NETWORK ELEMENTS?

A. Given enough time, anything is possible. The market has already incorporated its expectations of any such losses, however, in the price of Verizon's stock. If such fears of competition were significant to investors' estimates of the required cost of capital, they have already accounted for them in valuing Verizon's stock.

Morgan Stanley states that,

> There is no doubt that competitive pressures are significant in the industry, with the recent opening up of New York to Bell Atlantic long distance heralding the new era. Nevertheless, we continue to firmly believe that the pie is growing, and those companies who execute effectively can succeed despite competitive pressures. The Bells have already absorbed significant local and toll competition from CLECs as well as significant rate reductions over the past several years. We also see the control of the customer, and the local loop combining with scale advantages to create significant competitive leverage for the local phone companies.[30]

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[29] Dresdner, Kleinwort, Wasserstein Research, "Verizon Communications", June 29, 2001, p. 2.

[30] Morgan Stanley Dean Witter, "Telecom - Wireline", January 21, 2000.

Q. FROM THE STANDPOINT OF FINANCE THEORY, IS COMPETITIVE RISK GENERALLY ACCEPTED AS BEING RELEVANT TO THE DETERMINATION OF THE COST OF CAPITAL?

A. As I discussed in my direct testimony, capital market theory indicates that the market would not increase the cost of capital for competitive risks which investors can diversify away by purchasing a diversified portfolio of stocks.

Q. IN HIS REBUTTAL TESTIMONY DR. VANDER WEIDE HAS TESTIFIED THAT TELEPHONE HOLDING COMPANIES ARE ACTUALLY LESS RISKY THAN THE LEC'S BECAUSE THEY HAVE DIVERSIFIED (VANDER WEIDE REBUTTAL, P. 31).[31] CAN THIS BE TRUE?

A. No. As I stated in my rebuttal testimony, engaging in businesses which are systematically riskier than the wholesale network element business, such as wireless or international ventures, will always make the risk of the telephone holding company greater than that of the wholesale network element business. Overall risk can never fall because of the acquisition of systematically riskier businesses.

In its last access charge rate represcription proceeding, the FCC stated that:

> It seems counterintuitive to suggest, as Bell Atlantic does, that diversification into riskier businesses could actually reduce the business risk of an RHC so that it is lower than the business risk of the regulated business.[32]

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[31] Dr. Hausman has similarly argued at pages 19 to 21 of his rebuttal testimony that the UNE business is riskier than the overall risk of Verizon.

[32] FCC Order 90-315, In the Matter of Represcribing the Authorized Rate of Return for Interstate Services of Local Exchange Carriers, CC Docket No. 89-624, September 19, 1990, ¶ 84, p. 7517.

> However, the record does show that the RHCs are also involved in activities which are perceived as riskier than their regulated telephone business. We therefore find that we should give some weight in our decision to the possibility that a cost of equity estimate for an RHC as a whole company might somewhat *overstate* the cost of equity for interstate access service alone. [*emphasis added*] (*Id.*, ¶ 86, p. 7517).

3. Dr. Vander Weide has not offered plausible or consistent reasons why telephone companies should not form the appropriate DCF comparison group.

Q. WHAT REASON DOES DR. VANDER WEIDE GIVE FOR USING AN S&P INDUSTRIAL COMPARABLE SET?

A. He states that:

> Since the S&P Industrials are a group of competitive firms whose composite risk is average, I have selected them as a reasonable proxy for Verizon VA's risk of providing unbundled network elements in a competitive market. [Vander Weide rebuttal, p. 39]

Notably, Dr. Vander Weide again offers no proof for this assertion.

Q. YOU PREVIOUSLY CITED DR. VANDER WEIDE'S BELIEF THAT THE UNE MARKET IS ALREADY COMPETITIVE (VANDER WEIDE, P. 21). IF SO, COULD HE HAVE JUST USED A SAMPLE OF TELEPHONE HOLDING COMPANIES?

A. Of course.

Q. WHAT ARGUMENTS DOES DR. VANDER WEIDE CURRENTLY OFFER FOR NOT USING THE CLOSEST COMPARABLE COMPANIES?

A. Dr. Vander Weide's reasons are as follows:

> The DCF and CAPM Models provide more uncertain estimates of the cost of equity for companies such as the holding companies that are experiencing radical restructuring and profound regulatory, organizational and technological change. In addition, the four or five THCs are simply too small a group to obtain reliable cost of equity estimates. [Vander Weide rebuttal, pp. 37-38]

Q. WAS DR. VANDER WEIDE OFFERING A DIFFERENT ARGUMENT IN THE RECENT NEW YORK UNE COST PROCEEDING?

A. Yes. In his New York UNE cost proceeding rebuttal testimony, Dr. Vander Weide argued that telephone holding companies either involved in mergers or subject to merger speculation could not be used as proxies for other telephone holding companies because "the projected earnings growth associated with the mergers is not reflected in the analysts' growth rates" used in DCF analyses. (Vander Weide New York responsive testimony, p. 30) he assumed that the stock prices would immediately rise upon the merger news and concluded that the DCF cost of equity would be biased downward. In support of his claim, Dr. Vander Weide produced in his New York responsive testimony an exhibit showing gradually rising I/B/E/S forecast growth rates for several merging telecommunications companies.

I showed that these data did not support Dr. Vander Weide's claim. First, Dr. Vander Weide assumed that the increase of I/B/E/S forecast growth rates over the last several years result solely from mergers. However, each of the companies selected by Dr. Vander Weide has engaged in numerous high-growth endeavors during the period illustrated in his exhibit. Obviously, a far greater proportion of growth rate increases would derive from high-growth businesses than would arise from the cost cutting measures which mergers make possible. Industry analysts have stated that "data and

wireless continue to expand [LECs'] piece of the revenue pie."[33] ABN AMRO reiterated that it saw "three catalysts of Bell Atlantic growth: high-speed data, global wireless and long-distance entry."[34] Verizon's international business segment, as an example, grew by 18.6% in 2000 and 21.2% in 1999.[35]

Second, had Dr. Vander Weide investigated these mergers, he would have found that the stock price of at least one of the companies declined after the announcement of the merger.[36] A decline in the stock price would result in a *higher* cost of equity if DCF model calculations were performed keeping all other parameters unchanged. Moreover, after the merger was announced the aggregate market capitalization of the two merging companies went down in 5 out of 6 cases.

Another example in the news was the failed WorldCom/Sprint merger. When U.S. antitrust officials announced their intentions to investigate the planned merger, Sprint's stock price *rose* by 8.7% instead of declining. The day the Department of Justice filed suit to block the merger, WorldCom's stock price *increased* by 12.28%, while Sprint's stock price decreased by 9.56%. Contrary to Dr. Vander Weide's assertions, in the instances where a company's stock price is depressed because of merger anticipation, such as MCI WorldCom's stock, a DCF calculation would have provided a *higher*, not lower cost of equity estimate.

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33 Morgan Stanley Dean Witter, "Telecom - Wireline", May 15, 2000.

34 ABN AMRO, "Bell Atlantic Corporation", January 20, 2000.

35 Verizon Communications Inc. SEC Form 10-K405 for the period ending 12/31/00.

36 SBC stock declined after the announcement of each of its three mergers: SBC/Pacific Telesis, SBC/SNET and SBC/Ameritech. In three other mergers mentioned by Dr. Vander Weide, all stocks declined after the announcements except for Bell Atlantic stock's in connection with its merger with NYNEX.

Q. HAS DR. VANDER WEIDE ATTEMPTED TO DETERMINE WHICH COMPANIES IN HIS S&P INDUSTRIAL SAMPLE ARE SUBJECT TO MERGER OR ACQUISITION SPECULATION IN THIS PROCEEDING?

A. No. And it is very ironic that Dr. Vander Weide does not cull out telephone holding companies that he suggested would yield downwardly-biased cost of equity estimates in the New York UNE cost proceeding. While Dr. Vander Weide has argued that mergers and merger speculation are important to the selection of appropriate comparables, he has not analyzed the companies in his sample to determine which ones are in industries that have or are anticipating merger activity. Standard & Poor's itself acknowledges that "[t]he S&P 500 is a great list of merger candidates—the companies are well known and widely followed on Wall Street. The list is one of the first places an investment banker turns when searching for a big target."[37]

Other examples of industries represented in the S&P Industrials that have been involved in substantial merger activity are the banking industry (Wells Fargo, Chase Manhattan and US Bancorp merged with various smaller banks); the chemical industry (Eastman Chemical, Great Lakes Chemical have been involved in mergers); the food and beverages industry (Bestfoods, ConAgra, General Mills, HJ Heinz, Seagram, Kellogg participated in mergers); the entertainment industry (Time Warner merger with AOL, CBS with Viacom); the newspaper industry (Times Mirror merged with Tribune), etc.

Q. HAS DR. VANDER WEIDE ATTEMPTED TO DETERMINE AND CULL OUT COMPANIES IN HIS S&P INDUSTRIAL SAMPLE THAT ARE SUBJECT TO

[37] www.spglobal.com/howmany.html.

RESTRUCTURING, OR TO REGULATORY, ORGANIZATIONAL OR TECHNOLOGICAL CHANGE WHICH IN HIS VIEW WOULD MAKE DCF COST OF EQUITY ESTIMATES MORE UNCERTAIN?

A. No. he has not.

Q. IN YOUR EXPERIENCE, HAS DR. VANDER WEIDE EVER ACKNOWLEDGED THAT TELEPHONE HOLDING COMPANIES ARE APPROPRIATE COMPARABLES FOR OTHER TELEPHONE HOLDING COMPANIES?

A. Not that I can recall. For example, Dr. Vander Weide proposed the use of the S&P 500 to verify the reasonableness of the USTA cost of equity estimate in the FCC's access charge rate represcription proceeding completed in 1990, well before the 1996 Act.[38] The FCC properly rejected the use of Dr. Vander Weide's index approach in the 1990 proceeding.[39] Dr. Vander Weide's longstanding advocacy of S&P Index companies as a DCF proxy group for local telephone companies clearly predates the recent regulatory and competitive developments that ostensibly justify his approach.

Q. DR. VANDER WEIDE OBJECTS TO YOUR USE OF A SAMPLE THAT ONLY INCLUDES FIVE TELEPHONE COMPANIES. (VANDER WEIDE REBUTTAL,

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38 "Bell Atlantic asserts that because the S&P 500 is a group of large industrial firms, it is an excellent benchmark for determining the interstate access cost of equity and can be used to verify the reasonableness of the results of the USTA cluster analysis. USTA argues that the S&P 400 is a proxy for the competitive marketplace." FCC Order 90-315, In the Matter of Represcribing the Authorized Rate of Return for Interstate Services of Local Exchange Carriers, CC Docket No. 89-624, September 19, 1990, ¶144, p. 7524.

39 *Id.* at ¶162, P. 7526.

PP. 37-38) IS IT PREFERABLE TO USE A LARGER SAMPLE OF NONCOMPARABLE COMPANIES AS HE ADVOCATES?

A. Obviously not. The purpose for using a larger sample, when there are enough comparable companies that can be included in that sample, is to reduce measurement error in order to arrive at averages that more closely represent the true mean for the comparable company group. Even if one's sample by necessity is small, however, the averaging process reduces measurement error. In contrast, averaging over a group of noncomparable companies yields a mean *that in no way measures the parameter one is attempting to estimate for the subject company or for its industry.*

As Myers and Borucki put it:

> In real life, errors in estimating investors' forecasts of future growth are inevitable. The errors will occur even if all the DCF method's assumptions are satisfied. This does not invalidate the method; all approaches to measuring the cost of equity are liable to random error. *Responsible analysts attempt to average across similar companies whenever possible.*[40]

According to Dr. Vander Weide's flawed reasoning, it would be preferable to use a large sample of unrelated stocks trading on the Paris Bourse over a smaller sample of comparable telephone holding companies.

Q. DOES DR. VANDER WEIDE FOLLOW THIS RULE OF NOT USING SMALL SAMPLES OF COMPARABLE COMPANY GROUPS?

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[40] Stewart C. Myers and Lynda S. Borucki, "Discounted Cash Flow Estimates of the Cost of Equity Capital—A Case Study", *Financial Markets, Institutions & Instruments*, vol. 3, no. 3, New York University Salomon Center, 1994, p. 17. [*emphasis added*].

A. No. For example, in his New York responsive testimony, Dr. Vander Weide presented alleged "tests of reasonableness" similar to those that he presents in his rebuttal testimony for this proceeding. He calculated DCF results for groups of companies that he described as "interexchange carriers" and "large industrials." For the "interexchange carrier" group he averaged over a sample *of only two companies*. For his "large industrial" group, he averaged over a sample *of just three companies*. In both instances, he could have included more companies that fell within those groups, but consciously chose not to do so. In the case of "large industrials", his own S&P Industrial sample group would have allowed him to use a sample group of substantial size. In the present case he averages over only three companies for his group of "natural gas distribution companies", and averages over a group of only four "telecommunications companies", with Verizon itself notably excluded from the sample.

C. The S&P Industrial Companies Selected By Dr. Vander Weide Are Not A Valid Comparison Group For A DCF Analysis Of The Cost Of Equity Of The Network Element Business.

Q. DR. VANDER WEIDE ALLEGES THAT THE GROUP OF S&P INDUSTRIALS PROVIDES "A REASONABLE PROXY FOR VERIZON VA'S RISK OF PROVIDING UNBUNDLED NETWORK ELEMENTS IN A COMPETITIVE MARKET." (VANDER WEIDE REBUTTAL, P. 39) HAS ANY COURT EVALUATED THE LEGITIMACY OF DR. VANDER WEIDE'S USE OF S&P INDUSTRIAL COMPANIES AS COMPARABLES FOR TELEPHONE COMPANIES?